



PHOTOGRAPHY NEWS

BETTER THAN PAPER VIEW

Scientists at Canada's Université Laval have developed a lens that is five times thinner than paper. If that were not impressive enough, it can also zoom without any mechanical parts. The lens is made by adding a small quantity of photoelectric material to a liquid crystal cell. When a laser is shone at the material, it forms a network of stable polymers. An electric current can then be used to alter the alignment of the polymer within the cell, making its lens behaviour change. It takes under a second to move through the lens's full focal range, from 60cm to infinity. The designers think it could be useful in mobile phone cameras that currently have a fixed focal point, but we're sure that such a tiny and flexible lens will find a host of applications over the next few years.

OLYMPUS μ 800 ARRIVES

Olympus has announced a larger camera based on the styling of the μ -mini Digital, the S version of which is reviewed on page



166. The μ Digital 800 has a similar rounded body and coloured gloss finish, but has a considerably higher specification.

A 3x zoom lens sits up front, the 8-megapixel CCD records photos at a maximum resolution of 3,264x2,448 and a 2½" screen is mounted on the rear. Like all the Olympus μ cameras, the 800 Digital is waterproof. It will be in shops from July costing around £350 including VAT.

DIGITAL LENSES FROM SIGMA

Sigma launched several new lenses designed specifically for the digital SLR market this month. The APO 70-200mm F2.8 EX DG/HSM, priced at £800 including VAT, has a fixed aperture of f2.8 and uses low-dispersion glass to reduce lens flare. The 50-500mm lens, which costs £900 including VAT, uses the same glass coating but has an aperture of f2.8-f6.4 through its range. The 180mm telephoto macro lens, available for £550 including VAT, has an f3.5 aperture. All three lenses are available for Sigma, Canon, Nikon-D, Pentax and Konica Minolta mounts.



REVIEW DIGITAL CAMERA

HP Photosmart M22

RATING ★★★★★

PRICE £87 inc VAT

SUPPLIER www.misco.co.uk

DETAILS www.hp.co.uk



Apart from its flimsy plastic lens cover, HP's Photosmart M22 feels surprisingly solid. It's comfortable to hold, too, with easy access to controls for one-handed shooting. While some of the buttons are a bit fiddly, it's easy to use overall. Don't be fooled by the zoom pad on the back, though; the M22 is limited to digital zoom only, which we recommend you try to avoid. One advantage of a fixed lens is much faster focusing, and the M22 is responsive in general use.

The Photosmart M22 is one of the cheapest cameras to have a 4-megapixel sensor, producing photos at a maximum resolution of 2,320x1,744. This should be large enough for prints of around 8x6", but even for a sub-£100 camera the M22 doesn't capture quite as much fine detail as we'd expect. Textures and small elements of a picture, such as leaves, were smoothed to the point where many photographs take on the appearance of a watercolour painting. While this isn't always undesirable, we'd prefer it as a post-shot processing option rather than having it enforced by a murky lens. Colours are warm and bright, but there is also a good deal of noise in darker areas of a scene.

There's no viewfinder, but the small bright screen is fine for framing your shots and although

it's bit small for proper reviewing, flicking through the photos you've taken is fast and efficient. It takes AA batteries, so you can always find replacements should yours run dry, but in the long run you would save money with rechargeables.

If you just want an easy-to-use fun camera, the compact and affordable M22 will just about do the trick. However, Olympus's chunkier 3-megapixel C370, which is the same price, provides similar detail levels plus a useful 3x zoom lens.

David McKinnon

✓ Inexpensive 4-megapixel camera

✗ Behaves like a 3-megapixel camera

SPECIFICATIONS 2,320x1,744 resolution, 6x digital zoom, SD memory (16MB internal). **Part code** L1891a#AR3

HOTLIST DIGITAL CAMERA

NIKON Coolpix 8800

RATING ★★★★★

PRICE £530 inc VAT

SUPPLIER www.bestcameras.co.uk

DETAILS www.nikon.co.uk



An incredible 10x optical zoom takes the Coolpix 8800 right to the centre of the action, and its 8-megapixel CCD provides plenty of detail. However, at this price facts and figures would mean nothing without stunning image quality, and here the Coolpix 8800 delivers in spades. It's simply the best integrated digital camera available, and it won our *Labs* test of professional-quality digital cameras in *Shopper* April 2005.



SPECIFICATIONS 3,265x2,448 resolution, 10x (35-350mm) optical zoom, CompactFlash type I/II (none supplied). **Part code** VAA280BA

HOTLIST TRANSPARENCY SCANNER

EPSON Perfection 4180 Photo

RATING ★★★★★

PRICE £154 inc VAT

SUPPLIER www.morecomputers.co.uk

DETAILS www.epson.co.uk



If you want to get the best from your photos and slides when transferring them to your PC, you have to aim for maximum scanning resolution.

The Perfection 4180 Photo scans at a maximum of 4,800x9,600dpi, so you can be sure you'll capture every last detail. It can scan up to six slides at once, so it shouldn't take too long to digitise your entire collection.



SPECIFICATIONS 4,800x9,600 optical resolution, 35mm, slide, 120-roll transparency adaptor, USB Hi-Speed interface. **Part code** B11B170024



REVIEW DIGITAL CAMERA

CANON
IXUS 700

RATING ★★★★★

PRICE £280 inc VAT

SUPPLIER www.cameras2u.comDETAILS www.canon.co.uk

A curved metal case might make Canon's IXUS 700 look and feel bulletproof, but don't be fooled; standing on its narrowed base, it totters around in an unstable fashion, so you'll have to be careful when connecting it to your computer. Even though it weighs a reassuringly chunky 195g, its rounded design makes it very comfortable, though it's a bit precarious to hold.

The IXUS 700's interface is a joy to use. All the buttons are well placed and responsive and the menu system is easy to navigate and immediately informative. You are never in any doubt as to which shooting mode or setting is selected.

Although an optical viewfinder is included, it doesn't cover the whole frame, lacks dioptre adjustment and is uncomfortably small. Much more useful is the bright and detailed 2" LCD screen, which is comfortably large enough to frame and review your photos.

Images are recorded by a 7-megapixel CCD, producing an output resolution of 3,072x2,304 at the maximum setting. This is large enough for an 8x10" print at 300ppi. At the front is a fully retracting 3x zoom lens. This is standard issue for compact digital cameras and provides just enough shot-framing flexibility to make



the most of a CCD's capabilities.

In daylight the IXUS 700 records the same level of fine detail as the 6.3-megapixel FujiFilm F10 (reviewed in our *Labs* test on page 166). Textures and small objects such as leaves and grass are picked out accurately. In trickier light conditions the F10 captures more, though, thanks to its more sensitive CCD.

Photos taken with the IXUS 700 are generally well balanced with punchy colours that stop short of being oversaturated. Exposure was gauged correctly in most of our test shots, although there is exposure compensation if you hit a tricky scene. Most shots are free from unwanted image noise, but expect to find pronounced purple fringing in any areas of high contrast.

The IXUS 700 has some innovative colour modes, the most interesting of which are colour swap and colour accent. The former allows you to

switch two colours in a composition, while the latter lets you record only one colour, rendering the rest of the photo in monochrome.

Although digital stills cameras are not the best tools for budding filmmakers, Canon has admirably kitted out the IXUS 700 with impressive film modes. At 640x480 resolution it captures 30fps, while at 320x240 it captures an incredible 60fps for completely smooth video recording. The above colour effects can also be applied to full-resolution video. To make any real use of the video mode and to get the best out of the camera, you will have to budget for a larger memory card, as the 32MB card supplied will hold only 12 seconds of movies or seven pictures at the lowest compression and highest resolution.

The IXUS 700 has much to recommend it. It handles superbly and takes sharp, high-resolution pictures, perfect for enlargement or cropping. Novel colour effects and an excellent movie mode are great extras. Given the competition, though, it's just a little overpriced.

David McKinnon

✓ Easy to use; excellent movie and colour modes

✗ A little pricey

SPECIFICATIONS 3,072x2,304 resolution, 3x (37-111mm) zoom lens, SD memory (32MB included) **Part code** 9901A004AA

HOTLIST SCANNER

MUSTEK
Be@rpaw 4800TA Pro II

RATING ★★★★★

PRICE £62 inc VAT

SUPPLIER www.dabs.comDETAILS www.mustek.co.uk

It may have been around for a while, but this scanner still offers the entry-level buyer above-average transparency results. It's easy to operate, with a simplified control panel for those who find the TWAIN interface too much. Scan quality isn't perfect, it's not as fast as many other scanners and there are no Mac drivers, but it's a great value all-rounder.

SPECIFICATIONS 2,400x4,800 optical resolution, 35mm, slide transparency adaptor, USB Hi-Speed interface. **Part code** 98-155-00010



HOTLIST DIGITAL CAMERA

PANASONIC
Lumix DMC-FZ5

RATING ★★★★★

PRICE £285 inc VAT

SUPPLIER www.cameras2u.comDETAILS www.panasonic.co.uk

The FZ5's 12x optical zoom lens from Leica puts you right in the middle of the action and thanks to its optical image stabilisation you can still take pin-sharp photos. A 5-megapixel CCD records accurate, grain-free images at a maximum resolution of 2,560x1,920. A full range of manual controls are available should you need them as well.

SPECIFICATIONS 2,560x1,920 resolution, 12x optical zoom, 16MB SD memory. **Part code** DMC-FZ5-G



HOTLIST DIGITAL CAMERA

CANON
PowerShot A510

RATING ★★★★★

PRICE £128 inc VAT

SUPPLIER www.7dayshop.comDETAILS www.canon.co.uk

Canon has crammed a lot of controls into the A510, but it's still easy to use. It's comfortable to hold and uses standard AA batteries. The 3.2-megapixel camera has a 4x optical zoom and produces clear and vivid photos in automatic mode. Slip it into manual mode, though, and you can set the aperture and shutter speed, which is unusual for such an inexpensive camera.

SPECIFICATIONS 2,048x1,536 resolution, 4x optical zoom, 16MB SD memory. **Part code** 9717A007AA





REVIEW DIGITAL CAMERA

FUJIFILM
FinePix A350

RATING ★★★★★

PRICE £145 inc VAT

SUPPLIER www.cameras2u.comDETAILS www.fujifilm.co.uk

FujiFilm has launched two new entry-level cameras: the 5-megapixel A350 reviewed here and the 4-megapixel A345, which is about £15 cheaper. Both use the same 3x zoom lens.

Although it has a similar basic specification to many of the cameras in our digital camera *Labs* test on page 166, the A350 feels cheaper and less robust. The silver plastic shell is more reminiscent of a computer peripheral than a designer camera. Its rounded body is comfortable to hold, and while the screen is small it's bright enough. Interface buttons are well arranged but conform to the underlying budget feel with little tactile feedback.

Like most cameras at this price, the A350 produces punchy, oversaturated pictures. This isn't a problem, as holiday snaps can often look better with more colour, but keen photographers who are after an inexpensive compact camera should look elsewhere. Although not as sharp as more expensive 5-megapixel cameras, the A350 produces precise photos, although fine texture tends to be lost and block colours can take on a painted effect. In bright conditions dark areas can be lost completely, while



a fairly high level of purple fringing occurs on high-contrast borders.

The A350 is powered by AA batteries. This is handy if you run out while you are out and about, but you should invest in rechargables as they save you money in the long run. Also, the A350 comes with a paltry 16MB of storage, so you'll need to budget around £30 for an additional card.

Although pictures weren't as sharp as those of more expensive 5-megapixel cameras, the A350 compares well with similarly priced cameras. For the quick-and-easy holiday snapper, the A350 is a great buy.

David McKinnon



Inexpensive 5-megapixel camera



Photos are a little soft

SPECIFICATIONS 2,592x1,944 resolution, 3x (35-105mm) zoom lens, xD memory (16MB supplied)

REVIEW SCANNER

FUJITSU
ScanSnap fi-5110EOX2

RATING ★★★★★

PRICE £309 inc VAT

SUPPLIER www.dabs.comDETAILS www.fel.fujitsu.com

A normal flatbed scanner is great for capturing single sheets of paper, but without an automatic document feeder (ADF) it isn't much use for digitising a whole stack. If you need to archive paper documents regularly, this scanner from Fujitsu might be just what you need.

The ScanSnap looks like a tiny fax machine. Its ADF holds up to 50 sheets of paper, which it sucks through briskly when scanning. Scanning at 150dpi, it can produce 15 pages in its output tray every minute, capturing both sides at once if necessary. Fujitsu says that it can scan A3 pages, but each sheet must be folded so it's not strictly the case.

Fujitsu provides a generous software bundle that includes a full version of Adobe Acrobat 7. The ScanSnap's driver isn't TWAIN compliant, but its software can detect blank sides automatically, correct skewed orientation and switch between colour and mono scanning, depending on what the source page contains. It's possible to override this manually if you prefer.

We tested the ScanSnap with 17 sheets of paper. Our stack contained a mix of single and double-sided documents in colour and mono, some of which were deliberately upside down. It took one



minute and seven seconds to scan and process all 17 sheets, correctly removing all the blank sides to produce a 27-page PDF. Only one of the upside-down sheets escaped detection. Every other page seemed too light, suggesting that the two scan heads weren't matched on our test model. Other than this, quality was sharp and well suited to document scanning.

Higher-resolution scans didn't capture enough detail for more advanced creative work, but this scanner isn't built with that in mind. If you have a paper mountain that needs cutting down to size, the pricy ScanSnap is up to the job.

Simon Handby



Fast document management scanner; excellent software bundle



A little expensive; not a true A3 scanner

SPECIFICATIONS 600x600dpi optical resolution, 24-bit colour depth, USB interface. **Part code** PA03360-B011

CHOOSING A...

FLATBED
SCANNER

If you're thinking of buying a flatbed scanner but wonder what features you need, look no further than our expert guide

1

A basic flatbed scanner (see specs in grey below) can produce surprisingly good scans if the mechanics and optics are up to scratch – something you can't tell without performing a test scan. The colour depth is often quoted but this gives you no idea how faithful those colours will be, and poor focus can make a high optical resolution irrelevant. Disregard interpolated resolutions: they just blow up the scanned picture without adding any extra detail.

2

If you have a high workload, it's worth paying more for a faster scanner. The best can produce an A4 300dpi scan in 15 seconds and a preview scan – used to select a detail to scan – in around five seconds. If you have to scan a stack of paper, buy a scanner with an automatic document feeder (ADF).

3

A 300dpi scan is sharp to the human eye, but if you print it at twice the original size the final resolution is a grainy 150dpi. If you plan to print extreme enlargements you need a 1,200x2,400dpi, 2,400x2,400dpi or 2,400x4,800dpi flatbed. The mechanism and optics quality should also be increased accordingly.

4

Transparencies, such as slides and negatives, must be backlit to be scanned – look for a transparency adaptor. A 35mm film needs to be scanned at very high resolution to produce a decent-sized image. It is better to use a dedicated film scanner for such small items as they can cope with dust and scratches automatically.

5

Beyond the standard TWAIN driver that provides compatibility with any scanner-aware software, decent image-editing and OCR software is useful.

FILL IN YOUR SPECS HERE
(Recommended minimum in grey)

SCANNING AREA: A4

OPTICAL RESOLUTION: 600x1,200dpi

INTERFACE: USB Hi-Speed

SOFTWARE: TWAIN driver